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News Summary

Articles on inside pages

The University of Washington is displaying what it says is a newly discovered painting by Leonardo da Vinci, but some scholars aren't so sure it's his work. Story on Page 3.

Finding new ways to use psychoanalysis to help the community is one goal of the Institute for Psychoanalysis in Chicago. Story on Page 6.

A "Hippocratic Oath" has been proposed by one economist to guide his colleagues in advising Presidents and other policymakers. Story on Page 17.

Minority-group writers believe their work is too often regarded more as a cultural curiosity and ethnic artifact than as serious literature. Story on Page 8.

Evaluations of doctoral programs in the biological sciences have been published by the National Academy Press. Fact-File on Pages 14-16.

State budget directors report they expect to collect $8-billion less revenue in the current fiscal year than they projected last spring. Story on Page 10.

Two vocal supporters of federal aid to colleges will give up seats on the House Budget Committee in the new Congress. Story on Page 19.

A U.S. judge has ruled in a New Jersey case that mandatory fees that nonmembers pay to be represented by a faculty union cannot be used for some types of lobbying. Story on Page 25.

The French government will propose wide-ranging reforms in the country's university system this month, and a political battle is expected. Story on Page 21.

ALSO IN THIS ISSUE

Athletics	20
Books	27-31
Bulletin Board	36-71
Calendar of Events	33-35
Deadlines	35
Deaths	33
Fact-File	14-16
Gazette	33
Grants	33
International News	21-23
Letters	32
Marginalia	2
News in Brief	2-3
Personal and Professional	25-26
Point of View	72
Washington News	18-19

Copyright Office Asks Congress to Improve Law

Better balance sought for creators and users

By STACY E. PALMER

WASHINGTON

The U.S. Copyright Office last week asked Congress to press for a better balance "between the rights of creators and the needs of users of copyrighted works in libraries and archives."

The Copyright Act of 1976 provides a "workable structural framework" for such a balance, the office said in its first five-year assessment of the law's effectiveness in regulating photocopying activities in libraries.

But it warned that, without new legislation, continuing disputes between publishers and librarians over the meaning and application of portions of the act would have to be resolved in the courts.

A summary of the office's recommendations appears on Page 26.

In one key recommendation, the office supported an "umbrella statute" favored by the publishing industry that would allow users to copy protected works for a "reasonable" fee and otherwise excuse them from paying attorneys' fees or damages for copyright violations. The proposal is a major source of disagreement between pub-

Continued on Page 26, Column 1

Rash of Books Urge Disarmament as Scholars Join Nuclear Debate

By ELLEN K. COUGHLIN

"It's a small industry at the moment," says Richard Falk of the recent rash of new books by scholars on the disarmament side of the nuclear debate.

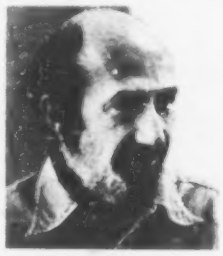
He should know; he's one of the laborers. Indeed, he and a number of other scholars—"separately and independently," in Mr. Falk's words—have begun to lend not only their voices but also their written words to the growing campaign to put an end to the nuclear-arms race.

Two prime examples of recently published works by such scholars are *Indefensible Weapons: The Political and Psychological Case Against Nuclearism* (Basic Books), by Robert Jay Lifton, a psychiatrist at Yale University's medical school, and Mr. Falk, a professor of international law at Princeton University; and *Beyond the Cold War: A New Approach to the Arms Race and Nuclear Annihilation* (Pantheon Books), by E. P. Thompson, the noted British social historian.

Although the two books approach the nuclear issue from different points of view, their authors share a common sense of the danger—and the absurdity—of the nuclear-arms buildup and a common disdain for fellow scholars who, through research on defense-related subjects, have contributed to the proliferation of nuclear arms.

The study by Dr. Lifton and Mr. Falk examines what they call "nuclearism"—the "psychological, political, and military dependence on nuclear weapons, the embrace of the weapons as a solution to a wide variety of human dilemmas, most ironically that of 'security' "—from the separate but, they

Continued on Page 27, Column 2



"Our proper enterprise as 'thinkers' is to mount a struggle against the nuclear menace."
—Richard Falk

Amid Controversy, U.S. Agriculture Department Seeks Improvements in Its Research System

CHRONICLE PHOTOGRAPH BY JOHN C. PHILLIPS

Orville G. Bentley: "I don't think the organizational system is wrong. What we have to do is to build a philosophy of broadening our horizons."

By KIM McDONALD

WASHINGTON

Even before he came here from Illinois, Orville G. Bentley knew his biggest challenge would be to find a way to improve the U.S. Department of Agriculture's research system.

Mr. Bentley, former dean of the agriculture school at the University of Illinois at Urbana-Champaign, was named the department's Assistant Secretary for science and education in September by President Reagan.

Waiting for him when he arrived here in October were a number of critical reports from Congress and the White House concluding that the department's research system had lost its focus and was badly in need of an overhaul despite notable past achievements.

The most biting of those reports was issued last fall by the White House Office of Science and Technology Policy. Based on the comments of 15 representatives of government, industry, and academe who attended a conference at Morrilton, Ark., the White House report criticized the Agriculture Department's research system for failing to provide adequate support for basic research that would help realize national goals. It also said the system's leadership had emphasized political rather than research needs, supported research of uneven quality, and isolated scientists at many of the 63 university-operated agricultural-experiment stations across the country from their scientific peers at universities and federal laboratories.

While some of the same complaints had

Continued on Page 12, Column 3

Finding a Home Away from Home

Campus housing officials and academic administrators often collaborate to help visiting faculty members and others find homes away from home for sabbaticals and vacations. Tapping contacts within higher education often is more fruitful than using travel or housing agencies to find such housing, an informal survey shows.

"Personal & Professional" section, Page 25.

FACT–FILE

616 Doctoral Programs in Biological Sciences Rated

Evaluations of 616 doctoral programs in six disciplines in the biological sciences have been published by the National Academy Press here as part of an assessment of the quality of graduate education in the United States.

Among the 16 measures in the assessment were 4 based on a survey of the reputations of the doctoral programs among faculty members. The respondents were asked to rate:

- The scholarly competence and achievements of faculty members in a stratified random sample of the departments in the respondents' field.
- The effectiveness of those departments in educating research scholars and scientists.
- The improvement of the program over the past five years.
- How familiar they were with the programs being rated.

The resulting raw scores were standardized on a scale where 50 represents the average score for all rated departments.

Copies of the report, *An Assessment of Research Doctorate Programs in the United States: Biological Sciences*, are available for $10.50 each from the National Academy Press, 2101 Constitution Avenue, N.W., Washington 20036.

Following are the standardized scores:

Biochemistry

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of Alabama	49	51	58	46
Albany Medical C.	41	—	—	39
U. of Arizona	50	49	53	45
U. of Arkansas	37			39
Auburn U.	35	—	—	37
Baylor C. of Medicine	51	50	51	53
Boston U.				
Biochemistry	50	49	61	48
Medical & dental sciences	48	44	48	47
Brandeis U.	67	66	46	71
Brown U.	52	45	49	47
Bryn Mawr C.	40	42	—	41
City U. of New York				
Graduate School	51	51	46	44
U. of California				
Berkeley	71	72	47	71
Davis	61	63	57	65
Irvine	54	51	50	54
Los Angeles	66	63	58	67
Riverside	50	53	53	48
San Diego				
Biology	63	61	59	62
Chemistry	66	63	63	66
San Francisco	69	64	74	71
Santa Barbara*	54	46	41	54
Case Western Reserve U.	56	58	39	56
U. of Chicago	64	62	51	65
U. of Cincinnati	48	52	63	46
Colorado St. U.	44	44	51	45
U. of Colorado	53	48	65	53
Columbia U.	64	59	52	64
U. of Connecticut	50	47	40	50
Cornell U.	67	66	59	71
Cornell U. Medical Center	60	59	42	58
Dartmouth C.*	47	44	37	46
U. of Delaware	48	49	64	50
Duke U.	63	64	57	63
Emory U.	45	40	52	46
U. of Florida	46	50	59	47
George Washington U.	47	46	43	44
Georgetown U.	43	43	43	44
U. of Georgia	48	50	48	47
Harvard U.				
Graduate school	74	71	50	76
Medical school	69	67	45	68
U. of Hawaii	46	45	49	47
U. of Health Sciences–Chicago Medical School*	43	34	—	41
U. of Houston	43	—	—	38
Howard U.*	34	27	—	39
U. of Illinois				
Medical Center at Chicago	48	48	41	46
U. of Illinois				
Urbana-Champaign	62	64	54	63
Illinois Inst. of Tech.	39	39	—	38
Indiana U.–Purdue U.	49	51	41	44
Iowa St. U.	53	54	42	56
U. of Iowa	59	56	63	58
Johns Hopkins U.	58	61	49	56
Kansas St. U.	43	43	50	44
U. of Kansas				
Graduate school	44	48	46	42
U. of Kansas Medical Center	48	49	54	50
U. of Kentucky	46	43	41	48
Loma Linda U.	30	—	—	37
Louisiana St. U.	38	35	—	40
U. of Louisville	41	40	52	43
Loyola U. of Chicago	36	35	—	39
U. of Maryland				
Baltimore Prof. Schs.*	45	45	56	46
College Park*	42	—	—	39
Massachusetts Inst. of Tech.	74	74	57	74
U. of Massachusetts	48	49	54	47
Medical U. of South Carolina	43	45	—	41
U. of Miami	51	50	51	54
U. of Michigan	62	63	49	65
Michigan St. U.	57	58	53	58
U. of Minnesota	58	58	60	60
U. of Missouri	48	45	48	47
U. of Nebraska	40	43	52	42
U. of New Hampshire	32	—	—	37
U. of Medicine & Dentistry of New Jersey	39	36	—	40
New York U.	58	53	31	53
U. of North Carolina	56	56	65	57
North Carolina St. U.	45	43	43	45
U. of North Dakota	41	—	—	45
North Dakota St. U.	33	—	—	38
Northern Ill. U.	34	30	—	41
Northwestern U.	61	58	48	62
U. of Notre Dame	40	38	—	43
Ohio St. U.				
Physiological chemistry	46	44	34	43
Biochemistry	48	45	39	48
U. of Oklahoma	46	48	46	47
Oklahoma St. U.	47	48	41	44
U. of Oregon	57	58	48	53
Oregon St. U.	55	57	60	55
U. of Pennsylvania	65	60	50	68
Pennsylvania St. U.				
Graduate school	50	54	52	48
Hershey Medical Center	45	43	46	43
U. of Pittsburgh				
Arts & sciences*	52	51	45	49
Medical school	48	45	27	46
Princeton U.	59	57	25	59
Purdue U.	57	56	51	58
U. of Rhode Island	37	38	—	39
Rice U.	55	55	65	54
U. of Rochester	48	48	53	47
Rockefeller U.	71	66	44	72
Rutgers U.	56	54	57	50
St. U. of New York				
Albany	43	34	31	45
Buffalo, graduate	48	44	43	43
Buffalo, medical	48	48	55	48
C. of Environmental Science & Forestry*	30	29		38
Stony Brook*	54	55	63	56
Downstate Medical Center	43	38	32	43
Upstate Medical Center	43	39	—	41
Saint Louis U.	51	51	45	52
U. of South Dakota	36	34	—	40
U. of Southern California	54	51	49	54
Southern Ill. U.	39	37	52	41
Stanford U.	74	73	60	76
Syracuse U.*	41	42	36	44
Temple U.	53	51	48	52
U. of Tennessee	39	43	40	41
U. of Tennessee Center for the Health Sciences	49	48	50	43
Texas A&M U.	45	—	—	42
U. of Texas, Austin	54	55	37	53
U. of Texas Health Science Center, Houston	53	52	71	50
U. of Texas Health Science Center, San Antonio*	50	49	77	46
U. of Texas Medical Branch, Galveston*	43	33	—	41
Thomas Jefferson U.	37	—	—	38
Tulane U.	44	38	—	41
U. of Utah	52	51	37	47
Vanderbilt U.	56	56	52	57
U. of Vermont	41	37	57	44
Virginia Commonwealth U.	45	50	73	43
Virginia Poly. Inst. & St. U.	41	42	52	42
U. of Virginia	55	53	57	50
Wake Forest U.	41	35	43	43
U. of Washington	62	61	48	65
Washington St. U.*	50	52	63	48
Wayne St. U.	49	48	34	47
West Virginia U.				
Agricultural biochemistry	34	—	—	35
Medical biochemistry	43	43	49	42
U. of Wisconsin, Madison				
Biochemistry	71	70	46	74
Physiological chemistry	59	59	41	58
U. of Wyoming	35	35	—	41
Yale U.	70	68	63	70
Yeshiva U., Albert Einstein C. of Medicine	54	53	36	52

Botany

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of Arizona	40	45	38	40
Auburn U.	41	42	54	46
Brigham Young U.	43	47	49	44
U. of California				
Berkeley				
Botany	65	65	34	66
Plant pathology	59	56	50	49
Plant physiology	64	60	44	57
Davis				
Botany	68	67	63	74
Plant pathology	66	66	52	48
Plant physiology	68	66	65	66
Irvine	50	50	44	49
Los Angeles	60	57	51	62
Riverside	61	61	58	54
U. of Chicago	45	48	37	46
Claremont Graduate School	55	47	27	52
Clemson U.				
Plant pathology	36	39	—	35
Plant physiology	29	27	—	32
U. of Colorado	42	46	63	40
Colorado St. U.	49	50	55	57
U. of Connecticut	45	47	55	49
Cornell U.	66	65	51	66
Duke U.	62	65	50	62
U. of Florida	51	52	58	62
U. of Georgia				
Botany	58	56	69	62
Plant pathology	50	52	65	44
U. of Hawaii*	49	48	59	48
U. of Illinois				
Botany	60	58	52	63
Plant pathology, physiology	60	61	62	62
Indiana U.	58	57	40	62
U. of Iowa	45	47	37	45
Iowa St. U.				
Botany	52	52	46	46
Plant pathology	50	51	38	45
U. of Kansas	46	49	48	46
Kansas St. U.	46	44	69	42
U. of Kentucky				
Biological sciences	36	31	—	39
Plant pathology	53	54	72	48
Plant physiology	45	45	55	41
Louisiana St. U.	36	38	46	40
U. of Maryland	47	48	53	52
U. of Massachusetts	54	50	43	56
Miami U. (Ohio)	51	50	55	49
U. of Michigan	64	65	43	62
Michigan St. U.	60	60	48	75
U. of Minnesota				
Agriculture, biology, & forestry	54	52	57	43
Botany	54	52	48	46
Plant pathology	55	60	49	50
U. of Missouri				
Biological sciences	39	39	36	41
Plant pathology*	48	47	48	45
U. of Montana	35	35	36	42
U. of Nebraska	51	51	62	57
U. of North Carolina	58	57	59	59
North Carolina St. U.				
Botany	47	52	52	45
Plant pathology	59	60	60	49
U. of North Dakota	20	17	—	31
North Dakota St. U.	33	30	—	38
Ohio St. U.				
Botany	53	54	64	63
Plant pathology	48	49	52	43
U. of Oklahoma	51	50	57	55
Oklahoma St. U.				
Botany	32	31	33	37
Plant sciences	43	48	55	37
U. of Oregon	43	43	39	45
Oregon St. U.	54	54	49	67
Pennsylvania St. U.				
Botany	40	41	38	41
Plant pathology	58	59	56	48
Purdue U.	54	54	35	55
U. of Rhode Island	41	42	47	41
Rutgers U.	50	50	52	50
St. U. of New York				
C. of Environmental Science & Forestry	51	51	41	37
Southern Ill. U.	41	38	37	43
U. of Tennessee	46	50	43	45
Texas A&M U.				
Biology	37	39	36	43
Plant pathology	40	42	50	43
Plant physiology	45	47	38	41
U. of Texas, Austin	68	67	60	69
Vanderbilt U.	35	37	38	42
Virginia Poly. Inst. & St. U.				
Biology	45	45	59	47
Plant pathology, physiology	43	40	56	45
U. of Washington	58	55	59	62
Washington St. U.	48	52	63	48
Washington U. (Mo.)*	56	53	66	55
U. of Wisconsin Madison				
Botany	60	60	38	66
Plant pathology	65	66	45	57
Milwaukee*	38	36	44	38
Yale U.	63	61	43	60

Cellular and Molecular Biology

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of Arizona*	40	30	49	42
Atlanta U.				36
Baylor C. of Medicine*	57	56	62	59
Boston U.	46	38	36	43
Bowling Green St. U.	35	—	—	36
Brandeis U.	57	59	44	60
Brown U.	52	50	51	53
City U. of New York				
Graduate School	44	41	41	42
U. of California				
Berkeley	64	61	48	68
Irvine	53	51	51	55
Los Angeles	60	57	66	62
Riverside	47	42	44	42
San Diego	64	66	60	66
Santa Barbara	52	52	46	50
Case Western Reserve U.*	47	40	31	44
California Inst. of Tech.	70	72	47	71
U. of Chicago				
Biology	55	51	41	53
Biophysics & theoretical biology	58	59	42	51
Developmental biology*	54	47	33	57
Genetics	61	57	52	58

in New Assessment of Quality of Graduate Education

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of Cincinnati	37	—	—	40
U. of Colorado	62	63	64	67
Columbia U.	63	62	59	65
U. of Connecticut	48	42	41	50
Cornell U. Medical Center	52	50	45	46
U. of Delaware	40	38	36	40
Duke U.*	58	57	61	57
Florida St. U.				
Biological science	48	51	51	43
Molecular biophysics*	48	47		45
Harvard U.	65	67	36	67
U. of Houston	34	—	—	39
U. of Illinois	52	48	49	48
Indiana U.*	56	53	55	58
Iowa St. U.	46	42	—	43
Johns Hopkins U.	54	53	32	57
U. of Kansas	39	32	36	41
Loma Linda U.	23	—	—	35
Marquette U.	38	—	—	37
Massachusetts Inst. of Tech.	70	74	56	72
U. of Michigan	54	46	49	54
Michigan St. U.	48	45	53	51
U. of Minnesota	49	45	39	47
U. of Missouri*	36	26	—	39
U. of Nebraska*	41	42	—	39
U. of North Carolina	54	54	67	55
U. of North Dakota	30	—	—	35
North Texas St. U.*	32	29	—	39
Northwestern U.	53	54	59	53
Ohio St. U.	41	40	44	42
U. of Oregon	58	56	46	60
U. of Pennsylvania	56	54	44	59
U. of Pittsburgh				
Arts & sciences*	49	49	57	49
Medical school	40	—	—	36
Princeton U.	53	53	32	58
Purdue U.	55	55	49	57
Rensselaer Poly. Inst.	35	—	—	35
Rice U.	47	42	41	42
U. of Rochester	51	51	57	50
Rockefeller U.	70	67	53	72
St. U. of New York				
Albany	48	40	61	47
Buffalo, graduate & professional ed.	47	42	—	44
Buffalo, Roswell Park	49	45	45	48
Stony Brook	50	47	58	50
Downstate Medical Center	45	42	64	43
U. of Southern California	49	44	51	43
U. of Southern Mississippi	21	—	—	34
Stanford U.*	61	60	67	58
Syracuse U.*	43	40	33	41
Texas Woman's U.*		—	—	36
U. of Texas				
Austin*	51	43	46	47
Dallas*	44	41	43	44
U. of Texas Health Science Center, Houston	48	43	54	49
Tufts U.				
Biology	36	—	—	38
Molecular biology	48	49	49	46
Tulane U.	44	—	—	40
U. of Utah				
Biology	56	52	74	54
Cellular, viral, & molecular biology	50	50	64	48
Vanderbilt U.	48	46	43	52
U. of Virginia	52	52	66	53
U. of Washington	61	64	48	55
Washington U. (Mo.)				
Molecular biology*	60	57	58	62
Cell biology	58	54	52	59
Wayne St. U.	40	—	—	40
U. of Wisconsin, Madison	67	66	58	67
Yale U.	69	70	59	72
Yeshiva U.				
Albert Einstein C. of Medicine				
Anatomy	49	36	62	49
Cell biology	56	53	42	56
Molecular biology	50	45	46	50

Microbiology

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of Alabama	62	62	73	66
U. of Arizona	42	40	43	42
Auburn U.*	35	32	—	36
Veterinary school*	36	37	—	37
Baylor C. of Medicine	53	53	46	52
Boston U.	36	38	—	37
Brigham Young U.	40	36	—	40
U. of California				
Berkeley				
Bacteriology	55	56	35	50
Immunology	58	60	43	53
Microbiology	56	50	37	51
Parasitology*	—	—	—	37
Davis	64	65	54	64
Irvine*	58	55	64	57

Note: Ratings are standardized on a scale where 50 represents the average score for all rated departments.
(a) Rating of scholarly quality of faculty members in the program.
(b) Rating of the effectiveness of the program in education of research scholars or scientists.
(c) Rating of improvement in program quality in the last five years.
(d) Rating of the evaluators' familiarity with the work of program faculty.
* Program was initiated after 1970.
— Not available.

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of California—Continued				
Los Angeles	66	67	60	73
San Diego	68	67	61	69
San Francisco				
Immunology*	47	44	38	44
Microbiology	62	60	60	60
Case Western Reserve U.	47	47	27	50
Catholic University	25	—	—	37
U. of Chicago				
Immunology*	57	59	60	48
Microbiology	61	60	50	61
Virology	68	64	63	64
U. of Cincinnati	46	43	40	47
Colorado St. U.	44	48	43	44
Columbia U.	64	63	61	62
U. of Connecticut	51	50	47	53
Cornell U.	58	58	56	54
Cornell U. Medical center	60	57	52	56
Duke U.	67	67	59	70
Emory U.	49	46	73	49
U. of Florida	56	56	65	51
George Washington U.	44	44	39	42
Georgetown U.	47	43	36	46
U. of Georgia	50	51	53	55
Hahnemann Medical U.	42	42	51	46
U. of Hawaii	46	41	45	43
U. of Health Sciences–Chicago Medical School	35	—	—	37
U. of Idaho	34	35	48	38
U. of Illinois	65	67	52	65
U. of Illinois Medical Center at Chicago	52	54	45	52
Indiana U.	54	55	45	58
Indiana U.–Purdue U.	46	46	46	45
Indiana St. U.	34	—	—	37
U. of Iowa	52	57	55	54
Iowa St. U.	47	50	33	48
Johns Hopkins U.	68	67	52	70
U. of Kansas				
Graduate school	46	49	45	48
Medical school	41	41	43	39
Kansas St. U.	47	47	51	47
U. of Kentucky	41	40	36	48
Louisiana St. U.	43	41	49	44
Louisiana St. U. Medical Center	45	41	55	44
U. of Louisville	47	44	45	43
Loyola U. of Chicago	45	47	61	43
U. of Maryland				
Baltimore, dental	35	35	36	38
Baltimore, medical	41	40	36	44
College Park	52	53	44	52
Massachusetts Inst. of Tech.	77	77	59	83
U. of Massachusetts	55	53	48	52
Medical C. of Wisconsin	44	46	45	44
Medical U. of South Carolina*	47	48	67	51
Miami U. (Ohio)*	37	42	47	41
U. of Miami	44	45	45	44
U. of Michigan	62	65	64	67
Michigan St. U.	57	60	56	62
U. of Minnesota	60	62	51	63
U. of Mississippi	24	22	—	36
Mississippi St. U.	33	28	43	37
U. of Missouri	49	50	69	55
Montana St. U.	44	41	66	40
U. of Nebraska	41	45	45	42
U. of New Hampshire	41	41	50	44
U. of Medicine & Dentistry of New Jersey*	46	41	59	43
New York U.	65	60	50	61
U. of North Carolina	60	57	56	65
North Carolina St. U.	49	52	53	48
Northwestern U.	49	51	47	46
U. of Notre Dame	49	47	42	46
Ohio St. U.				
Microbiology	45	47	37	49
Medical microbiology & immunology*	47	45	45	49
Veterinary pathobiology	45	—	—	35
U. of Oklahoma				
Graduate school	38	40	41	42
U. of Oklahoma Health Science Center	42	47	51	39
Oklahoma St. U.	37	30	30	45
U. of Oregon	57	54	51	47
Oregon St. U.	50	52	49	48
U. of Pennsylvania				
Immunology*	67	64	63	61
Microbiology	64	62	56	66
Parasitology	—	—	—	35
Pennsylvania St. U.				
Graduate school	43	43	20	48
Medical center*	53	53	49	61
U. of Pittsburgh				
Arts & sciences*	54	53	54	49
Medical school	49	48	44	49
Public health	43	43	28	43
U. of Puerto Rico	—	—	—	34
Purdue U.	60	59	52	63
Rensselaer Polytech. Inst.	44	—	—	37
U. of Rhode Island	42	37	—	40
U. of Rochester	55	57	54	51
Rockefeller U.	75	72	51	76
Rutgers U.	62	63	52	70
St. U. of New York				
Buffalo, graduate	47	47	52	46
Buffalo, medical	53	53	50	52
Downstate Medical Center	46	43	47	40
Upstate Medical Center	40	44	—	39
Saint Louis U.	47	46	35	46
U. of Southern California	55	48	55	52
Southern Illinois U.	37	36	49	46
Stanford U.	64	61	58	62

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
Syracuse U.*	46	48	36	52
Temple U.	49	47	38	54
U. of Tennessee	47	52	55	52
U. of Tennessee Center for the Health Sciences	51	44	55	52
U. of Texas, Austin	56	57	52	57
U. of Texas Health Science Center, Houston	53	51	56	54
U. of Texas Health Science Center, San Antonio*	47	45	62	49
U. of Texas Medical Branch, Galveston*	48	47	70	44
Texas A&M U.	33	27	—	40
Thomas Jefferson U.	40	39	39	42
Tufts U.*	56	54	62	50
Tulane U.				
Microbiology & immunology	38	35	38	44
Parasitology	43	—	—	35
Vanderbilt U.	58	55	47	56
U. of Virginia	56	56	52	55
Virginia Commonwealth U.	50	52	63	48
Virginia Poly. Inst. & St. U.	54	57	64	50
Wake Forest U.	45	46	52	47
U. of Washington	69	66	61	70
Washington St. U.	44	46	—	40
Wayne St. U.	52	53	61	51
West Virginia U.	44	40	50	44
U. of Wisconsin	62	66	53	65
Yale U.	63	61	40	61
Yeshiva U., Albert Einstein C. of Medicine	60	55	52	54

Physiology

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of Alabama	55	54	71	53
Albany Medical C.	45	49	48	47
U. of Arizona				
Animal physiology	—	—	—	37
Medical school	53	53	61	54
Baylor C. of Medicine	49	43	39	48
Brown U.	54	51	48	52
U. of California				
Berkeley	55	56	39	61
Davis	60	62	66	62
Irvine	52	56	65	50
Los Angeles	67	63	49	73
San Diego				
Biology	47	49	—	42
Physiology-pharmacology*	59	53	64	56
San Francisco	70	67	59	77
Case Western Reserve U.	46	35	27	45
U. of Chicago	58	57	50	63
U. of Cincinnati	46	48	56	45
U. of Colorado	50	41	56	45
Colorado St. U.	52	56	60	45
Columbia U.	63	58	53	61
U. of Connecticut	43	36	46	42
Cornell U.	57	60	52	52
Cornell U. Medical Center	53	52	42	51
Duke U.	63	64	44	69
Emory U.	46	45	33	51
U. of Florida	48	48	52	56
Georgetown U.	48	48	43	46
U. of Georgia	36	—	—	40
Harvard U.	65	67	49	55
U. of Hawaii	44	41	—	41
U. of Houston	31	—	—	36
Howard U.	38	34	55	42
U. of Illinois	61	59	59	63
U. of Illinois Medical Center at Chicago	49	49	45	50
Indiana U.	44	44	33	45
Indiana U.–Purdue U.	56	52	43	59
Indiana St. U.	24	—	—	37
U. of Iowa	56	57	56	65
Iowa St. U.				
Animal science	43	40	—	40
Veterinary physiology	44	41	—	42
Johns Hopkins U.	56	53	30	53
U. of Kansas				
Graduate school	38	40	43	40
U. of Kansas Medical Center	47	44	53	48
Kansas St. U.	39	—	—	40
Kent St. U.	—	—	—	36
U. of Kentucky	44	43	43	45
Louisiana St. U.*	26	—	—	36
Louisiana St. U. Medical Center	49	49	68	54
U. of Louisville	36	30	—	42
Loyola U. of Chicago	45	43	41	48
U. of Maryland*	—	—	—	34
Medical C. of Wisconsin	40	37	54	45
Medical U. of South Carolina	40	38	—	43
U. of Miami	54	45	58	52
U. of Michigan	65	62	50	71
Michigan St. U.	57	59	56	62
U. of Minnesota				
Animal science	34	30	—	40
Medical school	60	56	50	56
Graduate school	57	53	48	57
U. of Missouri	58	60	48	54
U. of Medicine & Dentistry of New Jersey	44	42	49	41
New York U.	54	48	61	51
U. of North Carolina	61	57	61	62
North Carolina St. U.	45	45	—	41
U. of North Dakota	28	27	—	39
Northwestern U.	55	54	73	55

Continued on Following Page

FACT-FILE—Continued

Physiology

Continued from Preceding Page

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
Ohio St. U.				
Physiology	44	41	—	44
Veterinary physiology	35	—	—	39
U. of Oklahoma	40	38	48	46
Oklahoma St. U.				
Animal science	—	—	—	37
Physiological sciences	—	—	—	38
U. of Oregon	50	51	51	43
U. of Pennsylvania	67	66	54	77
Pennsylvania St. U.	57	58	57	54
Purdue U.	61	52	45	46
U. of Rochester	55	58	41	56
Rockefeller U.	68	70	52	62
Rutgers U.	51	53	48	52
St. U. of New York				
Buffalo, graduate	—	—	—	38
Buffalo, medical	60	61	43	62
Downstate Medical Center	48	45	31	48
Upstate Medical Center	47	48	—	45
U. of Southern California	52	50	56	48
Stanford U.	54	56	34	57
Temple U.	38	34	—	42
U. of Tennessee	47	42	48	50
U. of Texas Health Science Center, Houston	57	55	67	50
Thomas Jefferson U.	—	—	—	41
Tufts U.*	28	23	21	38
Tulane U.	43	39	46	41
Vanderbilt U.	56	54	43	48
U. of Vermont	49	50	51	48
U. of Virginia	60	61	51	F*
Virginia Commonwealth U.	51	49	61	57
U. of Washington	68	69	54	74
Washington U. (Mo.)	63	63	59	61
Washington St. U.	40	46	43	44
Wayne St. U.	44	41	43	43
West Virginia U.	43	—	—	41
U. of Wisconsin	50	53	52	47
Yale U.	68	67	59	74
Yeshiva U. Albert Einstein C. of Medicine	58	53	46	56

Note: Ratings are standardized on a scale where 50 represents the average score for all rated departments.
(a) Rating of scholarly quality of faculty members in the program.
(b) Rating of the effectiveness of the program in education of research scholars or scientists.
(c) Rating of improvement in program quality in the last five years.
(d) Rating of the evaluators' familiarity with the work of program faculty.
* Program was initiated after 1970.
— Not available.

Zoology

	Faculty quality (a)	Effectiveness (b)	Improvement (c)	Familiarity (d)
U. of Arizona	55	57	58	57
Arizona St. U.	53	51	73	56
Auburn U.	39	44	45	35
Boston U.	48	47	35	49
U. of California				
Berkeley	70	69	42	71
Davis	58	58	54	62
Irvine	57	57	56	58
Los Angeles	67	67	51	69
U. of Chicago	62	62	35	59
Clemson U.	40	39	60	45
U. of Colorado	54	55	68	55
Colorado St. U.	50	52	66	53
U. of Connecticut	50	48	51	49
Cornell U.	61	59	42	56
Duke U.	67	67	56	67
U. of Florida	56	53	64	60
U. of Georgia	59	58	56	63
Harvard U.	74	72	44	73
U. of Hawaii	48	49	47	47
Howard U.*	36	35	—	35
Idaho St. U.	37	35	49	41
Indiana U.	56	57	26	53
U. of Iowa	57	55	63	57
Iowa St. U.	50	53	61	48
U. of Kentucky	44	41	45	40
U. of Louisville	36	35	33	37
Louisiana St. U.	36	39	47	41
U. of Maine	45	43	60	44
U. of Maryland	56	54	56	58
U. of Massachusetts	51	52	43	53
Miami U. (Ohio)*	43	44	44	45
Michigan St. U.	53	54	50	52
U. of Minnesota	51	56	42	49
Mississippi St. U.	35	32	39	37
U. of Nebraska	45	44	50	45
U. of New Hampshire	43	48	58	42
U. of North Carolina	58	57	58	59
North Carolina St. U.	47	48	49	44
U. of North Dakota	33	32	48	38
U. of Notre Dame	49	50	42	48
Ohio U.	37	37	39	42
Ohio St. U.	55	54	58	57
U. of Oklahoma	48	52	53	48
Oklahoma St. U.	39	40	44	42
U. of Oregon	55	54	42	55
Oregon St. U.	54	52	61	56
Pennsylvania St. U.	48	47	42	46
U. of Rhode Island	43	44	44	45
Rutgers U.				
Newark*	43	47	—	37
New Brunswick	50	54	50	46
St. U. of New York C. of Environmental Science & Forestry	50	52	48	37
U. of South Florida	41	42	52	44
Southern Illinois U. Carbondale	42	42	49	43
Stanford University	66	63	41	66
Syracuse U.*	50	47	35	50
U. of Tennessee	49	50	58	49
U. of Texas, Austin	65	64	53	65
Texas A&M U.	38	40	38	40
Texas Tech U.	46	44	63	43
Utah St. U.				
Biology	48	50	60	42
Range science	—	—	—	34
Vanderbilt U.	33	32	—	37
Virginia Poly. Inst. & St. U.	51	53	65	51
U. of Washington	69	70	69	73
Washington St. U.	51	52	55	49
Wayne St. U.	35	32	29	40
U. of Wisconsin				
Madison	66	65	44	65
Milwaukee	40	38	44	43
U. of Wyoming	40	42	60	40
Yale U.	69	69	49	66

SOURCE: CONFERENCE BOARD OF ASSOCIATED RESEARCH COUNCILS

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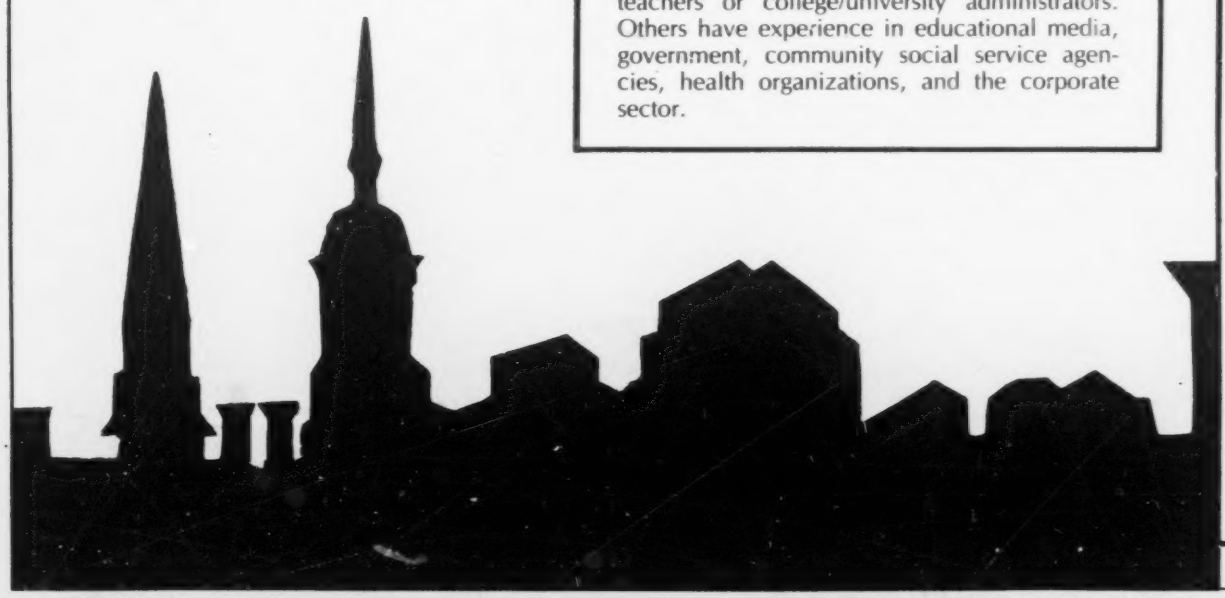

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